

REMARKS

In view of the rejections in paragraphs 2 and 4-6 of the Action and the references submitted in IDS on December 9, 2005, claims 1 and 4-6 have been amended. Claims pending in the application are patentable over the references, as explained below.

Rejection of claims 1 and 6 by Onda

In Onda, a protecting support member 14 is made by molding with an annular body 12, and after the molded product including the projecting support member 14 and the annular body 12 is formed, a rotor pinion 10 is inserted into the center hole of the support member 14.

In claim 1, pouring a rubber material with adhesive characteristic in a fluid state into the space between the permanent magnet and the rotating shaft, and vulcanizing and molding the rubber material to form a cushioning member having predetermined hardness so that the permanent magnet and the rotating shaft are integrally coupled through the cushioning member. In Onda, the rotor pinion 10 and the protecting support member 14 are not molded together.

In column 4, lines 1-5 of Onda, it is held that "Although the invention was described in terms of molding a protecting support member to a rotor magnet, it is obvious that the invention can also be applied to a case where the rotor magnet is attached by molding it directly to the rotor pinion." Namely, the annular body 12 can be directly molded with the rotor pinion 10. In this case, there is no cushioning member in Onda. Thus, the structure of claim 1 is not disclosed.

In claim 6, a plurality of recesses is formed on opposite surfaces of the cushioning member. Members 18' and 20' in Onda are face portions, which do not have any recesses.

Accordingly, claims 1 and 6 are not anticipated by Onda.

Rejection of Claims 2 and 3 by Onda in view of Itaya

Claims 2 and 3 depend from claim 1, which is not anticipated by Onda as explain above.

In column 8, lines 40-50 of Itaya, it is held that "More specifically, when the rare earth plastic magnet heated and molten at a temperature that is higher than the softening point t1 of the rotor body 31 is injected onto the body outer circumferential surface 30, the outer circumferential surface 30 is also heated above the softening point t1 with its surface portion being softened or molten and is engaged at a joint portion 38 with the rare earth plastic magnet so that the rotor body 31 and the rare earth plastic magnet are engaged and mixed with each other at the joint portion 38."

In claim 2, it is defined in part that "when said cushioning member is vulcanized and molded in the space between the permanent magnet and the rotating shaft, a molding temperature is controlled to be equal to or less than a temperature at which the plastic magnet does not deform." In Itaya, the magnet layer 32 is formed on the rotor body 31, not the rotating shaft. Itaya does not disclose that the molding temperature is controlled to be equal to or less than a temperature at which the plastic magnet does not deform in claim 2.

In claim 3, it is defined that "prior to vulcanizing and molding of said cushioning member, at least one of an inner peripheral surface of the permanent magnet and the rotating shaft is coated with an adhesive."

In Itaya, adhesive is disclosed to join the magnetic layer to a rotor body. However, it is not disclosed that the adhesive is applied prior to vulcanizing and molding.

Thus, claims 2 and 3 are not obvious from Onda and Itaya.

Rejection of claim 4 by Onda and Back

Claim 4 depends from claim 1, which is not anticipated by Onda as explain above.

In column 13, lines 14-22 of Back referred to by the Examiner, it is disclosed that the molded disk drive component can be subjected to a post-cure bake to optimize its mechanical properties. In claim 4, the joint portion between the rotating shaft and the cushioning member

is further bakes by high frequency welding method, which is made for increasing the adhering property. Baking for increasing the adhering property by the high frequency welding method is not disclosed in Back.

Claim 4 is not obvious from Onda and Back.

Rejection of claim 5 by Onda and EP '647

Claim 5 depends from claim 1, which is not anticipated by Onda, as explained above.

In EP '647, a rubber vibration isolator 7 is provided on an outer periphery of each bracket 6 for supporting a bracket 6 of a motor. Vent holes 6a, 7a are provided in the bracket 6 and the rubber vibration isolators 7 to cool the motor.

The vibration isolator is not formed between the rotating shaft and the magnet, and further, the vent holes are not formed parallel to the rotating shaft and equally spaced apart from each other around the rotating shaft to absorb displacement of the cushioning member. Thus, EP '647 does not disclose or suggest the hole formed in the cushioning member. Claim 5 is not obvious from Onda and EP '647.

References submitted by IDS

In regard to DE 23 28 886, a permanent magnet 1 in a ring shape is attached to a rotating shaft 3 by a cushioning member 2. However, DE '886 does not disclose that the cushioning member 2 is molded between the rotating shaft 3 and the permanent magnet 1, as stated in the EP Office Action. Also, the holes are not formed in the cushioning member. Thus, DE '886 does not disclose or suggest claim 1 of the invention.

In regard to FR 1,346,182, a rubber material 1 includes holes 2 to adjust flexibility of the rubber material 1. The holes 2 are not arranged parallel to the shaft and spaced equally away from each other around the shaft to absorb displacement of the cushioning member.


In regard to WO 99/12248, a cover 20 including magnet elements is molded on a core 10. The cushioning member is not disposed between the core and the permanent magnet.

As explained above, the claims pending in the application are patentable over the references cited in the Action and IDS.

Reconsideration and allowance are earnestly solicited.

Two month extension of time is hereby requested. A credit card authorization form in the amount of \$450.00 is attached herewith for the two month extension of time.

Respectfully submitted,

by 
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